The present application was filed specifically to initiate an interference with the Hill '490 patent by presenting Claims 33-72 that correspond to the same subject matter claimed in Claims 1-40 of the Hill '490 patent. In the Office Action, Claims 33-72 were rejected over the Hill '490 patent under 35 U.S.C. §135(b).

Applicants wish to express their appreciation for the courtesies extended to Applicants' attorneys, Israel Blum and John Osborne, during an interview conducted with Examiners Ramirez and Austin-Hollands, on December 15, 1998, to discuss the rejection of Claims 33-72 under 35 U.S.C. 135(b) and the reasons Applicants believe Claims 33-72 are directed to the same subject matter as Claims 1-40 of the Hill '490 patent. Applicants' attorneys are appreciative of the attention given this matter by the Examiners and address herein the issues that were discussed at the interview and the reasons Claims 33-72 should be allowed and an interference should be declared.

I. The Rejection of Former Claims 10-23 Under 35 U.S.C. §102 As Anticipated By The Harper Et Al. '137 Patent Is Moot And Should Be Withdrawn

Former Claims 10-23 have been rejected under 35 U.S.C. §102 as anticipated by Harper et al. U.S. Patent No. 4,750,137 ("Harper"). Harper is directed to providing an "updated state" image to update a peripheral device buffer by using an optimizer to construct a substitute host-peripheral signal based on taking the difference between the updated state image and present state image. Harper does not teach or suggest distributing application data in accordance with a predetermined plan as required by former Claims 10-23, i.e., there is no description of distributing data at host and remote computers depending on a preassigned storage candidacy value. Harper also does not teach or suggest assembling data in different categories at the remote

computer some of which always resides at the remote computer (subject to update) and some of which is always transmitted from the host computer. According to Harper, all characters are apparently subject to change and may be transmitted from the host computer. In view of the above-stated deficiences of Harper, former Claims 10-23 define patentable subject matter over Harper. Because former Claims 10-23 have been cancelled herein, the rejection of those claims under 35 U.S.C. §102 over Harper is now moot. Withdrawal of such rejection is respectfully requested.

Applicants note that former Claims 10-23 were identical to claims pending in the parent application at the time the present application was filed. However, Claims 10-23 were subsequently allowed substantially unchanged in the parent application which issued as U.S. Patent No. 5,758,072. At the interview, Applicants' attorneys informed the Examiners that Applicants are no longer relying on Claim 10 as a basis for satisfying 35 U.S.C. 135(b). Applicants' attorneys also informed the Examiners at the interview that they were now relying instead on amended Claim 1 of their grandparent application Serial No. 08/158,026.

II. The Rejection of Claims 33-72 Under 35 U.S.C. §135(b) As Barred In View Of The Hill '490 Patent Should Be Withdrawn

Applicants' Claims 33-72 have been rejected under 35 U.S.C. §135(b) as not being made prior to one year from the date on which Hill U.S. Patent No. 5,528,490 was granted. As shown herein, Applicants did in fact make a claim directed to the subject matter of the Hill claims within the period prescribed by 35 U.S.C. §135(b). This rejection should be withdrawn and an interference declared for the following reasons.

At the interview, the Examiners asked how the requirements of 35 U.S.C. §135(b) are satisfied if the claim(s) presented as corresponding to the proposed count were not in the application until more than one year after the issue date of the patent. In response, Applicants' attorneys pointed to amended Claim 1 of the grandparent application and explained how this claim satisfied the requirements of 35 U.S.C. §135(b). The substance of Applicants' remarks at the interview are set forth hereinafter.

The subject matter described and claimed in U.S. Patent 5,528,490 issued to Charles E. Hill is the same as the subject matter disclosed and claimed in Applicants' present application Serial No. 08/933,500. The present application was filed September 18, 1997 to initiate an interference with the Hill '490 patent which issued June 18, 1996.[1] Thus, the present application was filed more than a year after issuance of the '490 patent. Applicants' Claims 33 to 72 were copied from the Hill '490 patent and correspond to Claims 1 to 40 of the '490 patent.

As explained in section 2307 of the Patent And Trademark Office Manual of Patent Examining Procedure (MPEP), where an interference is sought between a patent application and an issued patent:

> If . . . the application was not filed until more than one year after issuance of the patent . . . , then under the provisions of 35 U.S.C. 135 (b), an interference will not be declared unless at least one of the claims which were in the application, or a parent application, prior to the expiration of the one-year period was for substantially the same subject matter as at least one of the claims of the patent. (emphasis added).

[1] Because of the effective filing dates of Hill and Applicants, Applicants will be the senior party in this requested interference by almost three years.

MPEP §2307 (7th ed. 1998). 37 C.F.R. §1.601(n) provides the standard for the "substantially the same subject matter" inquiry:

> Invention "A" is the same patentable invention as an invention "B" when invention "A" is the same as (35 U.S.C. 102) or is obvious (35 U.S.C. 103) in view of invention "B" assuming invention "B" is prior art with respect to invention "A". Invention "A" is a separate patentable invention with respect to invention "B" when invention "A" is new (35 U.S.C. 102) and non-obvious (35 U.S.C. 103) in view of invention "B" assuming invention "B" is prior art with respect to invention "A".

37 C.F.R. §1.601 (n).

> The test for interference-in-fact is set forth in §1.601(n), which provides that an invention "A" is a separate patentable invention with respect to invention "B" when invention "A" is new (35 U.S.C. 102) and non-obvious (35 U.S.C. 103) in view of invention "B", assuming invention "B" is prior art with respect to invention "A".

Fiddes v. Baird, 30 USPQ2d 1481, 1484-85 (Bd. Pat. App. & Interf. 1993)

Applicants' present application fully meets the requirements of Section 2307 of the MPEP. Specifically, amended Claim 1 of the grandparent of the present application, i.e., application Serial No. 08/158,026, filed Nov. 23, 1993, pending in the application from December 21, 1994 through April 11, 1996 "was for substantially the same subject matter as at least one of the claims in the patent", particularly Claim 1 of the '490 patent. Amended Claim 1 of Applicants' grandparent application was made prior to one year from the date on which the Hill '490 patent was granted. Applicants are therefore entitled to present additional claims directed to the same subject matter as Hill's claims. MPEP §2307.02; Tezuka v. Wilson, 224 USPQ 1030, 1036 (Bd. Pat. Int. 1984). Applicants have previously presented claims 33-72 by

way of preliminary amendment, which were copied from Hill claims 1-40 and are thus directed to the same subject matter as Hill's claims.

Claim 33, i.e., the proposed count, is patentable to Applicants subject to a judgment in the interference. The subject matter of amended Claim 1 of Applicants' grandparent application is also patentable to Applicants. Applicants' amended Claim 1 was rejected but Applicants did not acquiesce to unpatentability of amended Claim 1 and expressly traversed the Examiner's rejections in their grandparent application. A decision was made to forego prosecution of the claim as it existed to advance the case to issue. Applicants did not file a continuation application at that time to continue prosecution of amended Claim 1 for financial reasons. This in no way diminishes the fact that Applicants were claiming the subject matter within the time specified by 35 U.S.C. §135(b). Tezuka v. Wilson, 224 USPQ 1030, 1036 (Bd. Pat. Int. 1984); Crown Cork & Seal Co. v. Ferdinand Gutmann Co., 304 U.S. 159, 165 (1938).

A. Applicants' Method And System Are Directed To The Same Subject Matter As The Hill '490 Patent

At the heart of this matter is the fact that both Applicants' present application and the Hill '490 patent address and endeavor to solve the same technical problem, and propose to do so in substantially the same way. Indeed, Hill patent Claim 1 is anticipated by and obvious in view of the invention disclosed in Applicants' present application and each of their prior applications and associated issued patents. Fiddes v. Baird, 30 USPQ2d at 1484-85 (an

application claim is directed to the same subject matter as a patent if the application anticipates or renders obvious the patent claim).

As Applicants explain in the present application, at the time of making their invention interactive computer networks were not new. Specifically, prior art networks at that time commonly included conventional hierarchical architectures in which a central host responded to the information requests of multiple users located at remote locations. In these arrangements, the multiple users at their respective remote terminals accessed the host which included application data and software resources for sequentially receiving user data requests, executing them and supplying responses back to the user. (Application p. 2, line 25, - p. 3, line 1; p. 16, lines 7-31).

Such arrangements, however, presented significant problems for interactive applications. Placement of the computing resources and data at the host compelled introduction of objectionable response delays resulting from communication time associated with the user data requests which had to be sent from the terminal to the host, and the reply which then had to be sent from the host back to the user terminal. Indeed, bandwidth limitations of the communication line in such systems and associated communication delays caused by those limitations severely restricted the content of information that could be included in the applications. For example, graphics, pictures, color, etc., and their associated high data content could not be readily included in such applications in order to keep system response times at a level tolerable to the user. (Application p. 3, lines 10-33; p. 16, lines 17-32).

Still further, at the time of Applicants' invention, due to the limited storage capacity and processing power available to user terminals, it was not possible to avoid

communication line delay by trying to offer the interactive applications users demanded, e.g., news, home shopping, information services, as "stand-alone", i.e., offline applications. Nonetheless, Applicants' believed that they might ease communication delay somewhat by storing at least some application data at the limited capacity user terminals. However, Applicants also understood that if they did so, they would be faced with yet another problem, particularly, maintaining the currency of any information stored at the user terminals (Application p. 133, lines 7-29). Applicants recognized that the key to the public's acceptance of interactive services such as news, shopping, etc., would be maintenance of the currency of the information provided to the user.

Likewise, Hill, in his patent specification, expressly recognizes the very same problems and proposes his invention as their solution. Specifically, Hill notes that the primary disadvantage of dial-up shopping applications such as electronic catalogues available prior to his work was that they could not transmit graphics data from the host computer (vendor's computer) to the users computer (customer's computer) in a "meaningful time frame," i.e., they experienced objectionable communication line delay when graphics were included as part of the application content. Further, in this regard Hill goes on to point out that "[i]t takes a larger amount of time to transmit graphics data over telephone lines via modem especially if high-resolution is desired." Moreover, Hill points out that alternative systems which seek to provide all the data required to process requests at the user's terminal suffer from the problem of maintaining the "accuracy", i.e. currency, of the data so stored. (Hill '490 Patent col. 1, lines 12-36).

Accordingly, as expressed in both Applicants' application and Hill's '490 patent, both parties recognized and pointed to the problems they faced and sought to overcome, i.e.,

communication line delay in interactive computer network systems and the negative impact that delay imposed on acceptable application content, as well as the further problem of maintaining the currency of the data used to support such applications, especially where that data is sought to be stored at the user terminal. And, not unexpectedly, when the solutions proposed by Applicants and Hill are distilled to their principle features, they, as well, are seen to be the same.

Specifically, and as expressly taught in both the present application and the Hill patent, both Applicants and Hill propose to overcome the noted problems by establishing a plan for distributing application data in the network, that predetermined plan featuring the storing of at least some application data at the respective user's terminal to reduce need for communication with the host; providing the data with version identification so that data currency can be checked and maintained before use; designating application data based on likelihood of change over time for inclusion in categories that permit the more stable data to be stored at the user terminals and the more volatile data to be stored at the host so as to minimize currency problems; and integrating acceptable data from the user terminal and the host when a user's request for application information is made to reduce response time and increase assurance of data currency – the objective sought by both Applicants and Hill.

Applicants' method and system, like that disclosed in the later-filed Hill application, was designed to reduce the time and cost required to deliver interactive applications or information requested by subscribers for presentation at remote subscriber terminals. The subscriber terminals comprise a remote personal computer at which reception software is maintained. Each remote terminal is called a subscriber reception system ("RS").

To realize reduced application delivery time and delivery cost, Applicants' method and system is directed to minimizing the network data traffic required to present subscriber-requested applications or information. This is accomplished by enabling each subscriber RS to perform a substantial portion of the data processing necessary to generate requested applications, such as catalog shopping, travel planning, news review, etc., and by enabling the RSs to reuse the data and programs employed in presenting applications. Thus, a data storage facility is provided at each subscriber RS for retaining at least a portion of the data required to run requested applications.

Further, because of the limited storage resources typically available at a RS, the program code and display data of the present application are distributed in the network such that at least some of the data required to produce subscriber-requested applications is likely to be found at the subscriber's RS. To the extent data required to present the application is unavailable at the respective RSs, that data may be obtained on request from a main computer -- via what is called the network delivery system -- which includes the network host and communication concentrator units.

As a further aspect of Applicants' method and system, data is maintained at the respective RSs in accordance with a storage eligibility parameter which depends on, inter alia, the tendency of the data to change over time. Data that slowly varies over time, i.e., constant data, has a high storage eligibility. Data that quickly changes over time; i.e., variable data, has a low storage eligibility. In this regard, to the extent data changes very slowly with time; i.e., is constant, it may be afforded persistent storage status at the remote computer -- i.e., RS -- subject only to updating for currency if it becomes stale. To the extent data changes quickly with time,

i.e., is variable, it may be afforded no continuing storage at the RS, so that such data is always requested from a main computer -- i.e., the network delivery system -- when required.

Additionally, in accordance with Applicants' method and system, data is provided with a version identification to assure currency of data stored at a subscriber RS. At the time a subscriber requests information which necessarily involves some application, the subscriber's RS calls for the data required to generate that application from the RS storage facility. For data stored locally (i.e., constant data), the version identifications are transmitted to the network delivery system (i.e., main computer) and checked there to assure currency of the stored information. If the version is current, the network delivery system returns a message to the RS denoting that the data can be used. If the version identification indicates the data is not current, new, current data is sent to the RS.

If data required for the application is not stored locally, for example, where the applications require quickly changing data, the needed data will be sought and obtained from the network delivery system. As data required to generate the requested application are collected at the RS, the application is presented to the subscriber.

In sum, Applicants' method and system, like those of Hill, use (a) constant data stored at a remote RS which is version checked when accessed and updated from the network delivery system (or main computer) if necessary and (b) variable data which is accessed from the network delivery system when requested by a user at the remote RS. Thus, the claims of Applicants copied from the claims of the Hill '490 patent and pending in Applicants' grandparent application prior to one year after Hill's issue date, are directed to the same subject matter as the claims of Hill.

B. Although Hill's Claims 1-40 And Amended Claim 1 Of Applicants' Grandparent Application Use Different Terminology, They Are Directed To The Same Subject Matter

Hill's claims are directed to storing and transmitting data between a user's computer and another computer remote from the user's computer via a modem type connection. Amended Claim 1 of Applicants' grandparent application is directed to applications containing data.

Hill's claim term for a user's computer is "remote". Hill's claim terminology for a computer remote from the user's computer which supplies updated constant data and variable data to the user's computer is "main" computer. Applicants' claim terminology for the user's computer is "reception system" or "RS". Applicants' claim terminology for the main computer which transmits data and program instructions to the user's computer is the "network" which Applicants disclose as the "network delivery system" (Applicants' "main" computer is comprised of the host computer and concentrator computers).

Hill's claim terminology for data that does not change frequently and is thus stored at a user's computer is "constant". Hill's claim terminology for data that changes frequently and is thus not stored at a user's computer between sessions is "variable". Applicants' data falls within a broad range of susceptibility to change or update. Constant and variable data as described and claimed by Hill are actually subsets of the range of data permanency described by Applicants.

Hill's claim terminology for an indicator of data currency, i.e., whether data is stale or is the most current available is "revision status". Applicants' terminology for data

currency is "version control". Applicants' terminology for an indicator of the propriety of storing data at a user's computer is "storage candidacy". Both version control and storage candidacy are encompassed within Applicants' claim recitation of a "predetermined plan" of data distribution, as discussed below.

C. Detailed Comparison Of Applicants' and Hill's Claims For Purposes Of 35 U.S.C. §135(b)

As described above, Applicants' invention concerns a method for improving the performance of an interactive computer network. In accordance with Applicants' teaching, steps are described for reducing system response time to user information requests and for enabling inclusion of data rich content; as for example, graphics in the information provided.

To achieve the desired result, Applicants' invention in its broad aspect features use of a "predetermined plan" of data distribution within the network. Particularly, Applicants found that if they stored at least some select data at the user reception system, i.e., user terminal, and other data in the network delivery system, applications requested by the user could be produced at the user terminal from the data stored at the terminal as well as data stored in the network delivery system thereby significantly reducing response time and permitting inclusion of graphic-based content.

More specifically, Applicants found they could implement the "predetermined plan" of data distribution if they also included data control parameters to facilitate data management. In this regard, Applicants found that if they established which data could be stored at the terminal and which data should be stored in the network delivery system, they would be able to initiate the plan. Moreover, Applicants found that if they based the data storage location

decision on the likelihood of data change in time, i.e., constant vs. variable data, the distribution plan could be further optimized. Specifically, by placing the more constant data at the user terminal, and the more variable data in the network delivery system, the need to obtain data from the delivery system, with its associated response-time cost, could be reduced. Additionally, if the more stable data stored at the user terminal were graphics-based, richer content could be provided, again, without associated response-time cost.

Accordingly, as a feature of Applicants' predetermined plan they undertook to provide steps for identifying data storage candidacy. However, Applicants also recognized that the data stored at the user terminal in accordance with the predetermined plan might, from time to time, require change. As a result, Applicants further proposed to provide steps for identifying data revision level in order to identify data currency, as well as steps for checking the data revision in accordance with the storage candidacy before data at the terminal would be used. In so doing, Applicants provided not only for reducing system response time, but also for assuring currency of the information provided. Therefore, in its broad aspect, Applicants' invention includes a predetermined plan of data distribution that features steps for identifying data eligible for storage, as well as steps for checking data version for currency.

In accordance with the preferred embodiment of Applicants' invention described at length in their specification, Applicants sought to implement the broad aspect of their teaching, particularly, their "predetermined plan" featuring steps for identifying data eligibility for storage and data version checking, with a further inventive aspect of their invention, particularly, management of application data and code in such a predetermined plan with the use of "data objects." However, while implementation of the predetermined plan with data objects is a

preferred implementation, it is not the only possible implementation. And, indeed, Applicants' amended claim 1 is not limited to use of objects at all. While the use of data objects is preferred, in view of Applicants' disclosed implementation of the predetermined plan featuring associated steps of identifying data storage candidacy and version checking with the use of data objects, it can be appreciated that such a plan also could be adapted for implementation with the use of ordinary data files.

For example, while in preferred form storage control information and version control information is provided in the data object header, such storage control information and version control information in accordance with Applicants' teaching could also be provided in conventional data file information such as file name and version. Particularly, the data file name could readily identify eligibility for storage either with reference to an identifying storage character in the file name, or with reference to a list of file names eligible for storage; or, indeed, as Hill has proposed, by simply pre-designating and distributing files eligible for storage. And plainly, version control, as noted, could be readily facilitated with reference to a well known data file version identification.

With the above in mind, the substantial similarity between Applicants' invention as presented in amended Claim 1 and the Hill teaching as presented in Hill Claim 1 becomes even more apparent upon comparison of Applicants' amended Claim 1, as interpreted in light of Applicants' specification, with Hill Claim 1.

As shown in detail by the following chart and immediately following textual discussion, Claim 1 of the Hill '490 patent and amended Claim 1 of Applicants' grandparent application, which was made in the grandparent to the instant application prior to one year after

the Hill '490 patent issued, are directed to the same subject matter. Applicants' and Hill's claims have been broken into discrete elements for purposes of this discussion. As can be seen from the chart, Hill Claim 1 has been broken into ten parts. Applicants' amended Claim 1 also has been broken into ten parts. Applicants' amended Claim 1 elements that correspond to Hill Claim 1 elements are shown by cross-referencing them to the Hill Claim 1 elements. The chart is intended as a visual aid to accompany the following textual discussion. The discussion explains in detail, by reference to Applicants' specification, how the elements of Applicants' amended Claim 1 correspond to the elements of Hill's Claim 1.

Hill Claim Element Reference Numbers	**HILL '490 PATENT CLAIM 1**
1	1. A method for generating information related to a product, the method comprising the steps of:
2	storing and maintaining variable data and constant data related to at least one product and a main revision status in a memory of a main computer,
3	the main revision status indicating the revision level of the constant data stored in the main computer;
4	storing constant data related to the at least one product and a remote revision status in a memory of a remote computer, the constant data being a subset of information data related to the at least one product,

Applicants' Claim Element Reference Numbers	Corresponding Hill Claim Elements	**APPLICANTS' AMENDED CLAIM 1**
1	1	1. (amended) A method for operating a computer network so as to provide a multiplicity of users access to a multiplicity of applications, the applications each including data,
2	2	the network having one or more host computers, a plurality of concentrator computers connected in groups of one or more to each of the host computers, and
3	4	a plurality of reception system computers at which respective users may request applications, the reception system computers being connected in groups of one or more to each of the concentrator computers, the method comprising the steps of:
4	2,4	a. establishing data stores at the host computers, the concentrator computers and the reception system computers;

Hill Claim Element Reference Numbers	**HILL '490 PATENT CLAIM 1**
5	the remote revision status indicating the revision level of the constant data stored in the remote computer;
6	transmitting the remote revision status from the remote computer to the main computer;
7	comparing the remote revision status with the main revision status;
8	updating constant data stored in the memory of the remote computer with constant data maintained in the memory of the main computer that is different from the constant data stored in the memory of the remote computer;
9	transmitting variable data related to the at least one product from the main computer to the remote computer; and
10	integrating constant data related to the at least one product with the variable data related to the at least one product in the remote computer to generate the information data related to the at least one product including both constant data and variable data.

Applicants' Claim Element Reference Numbers	Corresponding Hill Claim Elements	**APPLICANTS' AMENDED CLAIM 1**
5	2,3, 4, 5, 6, 7, 8	b. distributing application data in accordance with a predetermined plan to data stores maintained, respectively, at the host computers, the concentrator computers and the reception system computers,
6	3,5	the predetermined plan being implemented, at least in part, by ascribing a storage control attribute to the application data, the control attribute dictating eligibility of the application data for storage; and
7	6, 7, 8, 9, 10	c. supplying application data to a respective reception system computer at which an application is requested
8	10	so that the respective reception system computer can assemble the data which makes up the requested application
9	8, 10	by selectively collecting data from its own data store and
10	6, 7, 8, 9, 10	the data stores of the respective host computer and concentrator computer to which it is connected.

As is clear from the above chart, amended claim 1 of Applicants' grandparent application is directed to distribution and updating of data in a network, with no restriction as to data objects. As discussed above, the preferred embodiment of Applicants' invention as described in the specification is directed to distribution and updating of the data by using data

objects. The following discussion makes reference to Applicants' disclosure of their preferred embodiment. The disclosure applies as well to distribution and updating of data without the use of data objects, i.e., a file-based system.

1. The Present Application And The Hill '490 Patent Are Directed To Providing Information To A User At A Remote Computer

The first requirement of Hill Claim 1 is the preamble recitation of generating information related to a product. Applicants' amended Claim 1 preamble recites "[a] method for operating a computer network so as to provide a multiplicity of users access to a multiplicity of applications." As discussed above, both Hill and the present application are directed to, inter alia, the distribution of application data in a network. Thus, Applicants' amended Claim 1 element 1 corresponds to Hill Claim 1 element 1.

2. Hill And The Present Application Both Store Constant And Variable Data At A Main Computer

The second element of Hill Claim 1 is the step of storing data that changes or is revised frequently ("variable" data) and data that does not change frequently ("constant" data) in the memory of a network or "main" computer (element 2). Hill's recitation of storing variable and constant data at the main computer is matched by Applicants' recitation in element 5 of amended Claim 1 of "distributing application data in accordance with a predetermined plan to data stores maintained, respectively, at the host computers, the concentrator computers, and the reception system computers". Applicants' disclosure supports amended Claim 1's language regarding the distribution of application data within the network as constituting the same subject

matter as Hill's storing of constant and variable data on a main computer. As can be seen from the specification, Applicants' network delivery system transmits data to a requesting RS, and routes data entered by the user or collected at the RS within the network. P. 13, lines 1-10. Applicants' recitations in elements 2 and 4 of a network and establishing data stores at the various computers in the network, respectively, further correspond to Hill's second element.

As for constant and variable data, Applicants disclose, at p. 137, line 6 - p. 138, line 26, that data has a storage candidacy value which dictates whether and for how long the data is stored at the RS. Two of the disclosed storage candidacy values (the first and second values) correspond to Hill's variable data in that they indicate different degrees of variable data:

> A first candidacy value is applied where the object [data] is very sensitive to time; e.g., news items, volatile pricing information such as might apply to stock quotes, etc. In accordance with this first value, the object will not be permitted to be stored on RS 400, and RS 400 will have to request such objects from delivery system 20 each time it is accessed, thus, assuring currency. A second value is applied where the object is sensitive to time but less so than the first case; e.g., the price of apples in a grocery shopping application. Here, while the price might change from day to day, it is unlikely to change during a session. Accordingly the object will be permitted to persist in RAM or at the disk cache during a session but will not be permitted to be maintained at RS 400 between sessions.

P. 137, lines 8-19. Other (the third and fifth) values corresponds to Hill's constant data:

> [W]here the object [data] concerns information sufficiently stable to be maintained between sessions a third storage candidacy value is set to permit the object to be stored at RS 400 between sessions, on condition that the object will be version check[ed] the first time it is accessed in a subsequent session.

P. 137, lines 20-25.

> Where the object [data] is of a type required to be stored at RS 400, as for example, objects needed to support standard screens, it is coded for storage between sessions ... However, where such objects are likely to change in the future they may be required to be version checked the first time they are accessed in a session and thus [are] given a fifth storage candidacy value.

P. 138, lines 1-7. Variable data therefore does not persist at the remote computer, it is retrieved from the network delivery system (or "main" computer) at which it is stored. Constant data, as noted above, is stored on the RS but is version checked when accessed. Thus, as noted, the most current constant data is always available from the network delivery system (or main computer).

Elements 2, 4 and 5 of Applicants' amended Claim 1 thus correspond to Hill element 2.

3. Both Hill And Applicants Store The Constant Data Revision Status At The Main Computer

The third element of Hill Claim 1 is storing, at the main computer, a constant data revision status indicating the revision level of the constant data stored at the main computer. Hill's recitation of storing a constant data revision status at the main computer is matched by Applicants' amended Claim 1 element 5 recitation of a "predetermined plan" and element 6 recitation of "the predetermined plan being implemented, at least in part, by ascribing a storage control attribute to the application data, the control attribute dictating eligibility of the application data for storage."

Applicants' disclose that wherever data is stored, so too is its version id. For example, where data objects are used, as in the preferred embodiment, they are provided with a coded version id made up of the storage control byte and version control bytes which are

elements of the object header. P. 135, lines 22-28. Since the object's version id is part of the object, the version control parameter related to an object is stored wherever the object is stored. Consequently, the latest version level of data contained in an object resides at the network delivery system (or main computer). P. 13, lines 1-10. When a file type format is used, version identification information would likewise be included in the data file and would thus accompany the data wherever it is stored.

Applicants' elements 5 and 6 thus correspond to Hill element 3.

4. The Step Of Storing Constant Data At The Remote Computer Is The Same In Hill's And Applicants' Claims

The fourth element of Hill Claim 1 is the step of storing a part of the constant data in the memory of the remote computer. Hill's recitation of storing the requested constant data at the remote computer is further matched by Applicants' recitation in element 5 of amended Claim 1 of "distributing application data in accordance with a predetermined plan to data stores maintained, respectively, at the host computers, the concentrator computers and the reception system computers." (including supplying data to the RS). Applicants' disclosure supports the amended Claim 1 language regarding distributing application data within the network as constituting the same subject matter as Hill Claim 1's recitation of storing constant data at the remote computer. As can be seen from the specification, Applicants' network delivery system transmits data to a requesting RS, and routes data entered by the user or collected at the RS within the network. P. 13, lines 1-10.

Applicants' recitations in elements 3 and 4 of reception system computers at which applications are requested and establishing data stores at various locations within the network, respectively, further correspond to Hill's fourth element.

Applicants' elements 3, 4 and 5 thus correspond to Hill element 4.

5. Both Hill And Applicants Store The Constant Data Revision Status At The Remote Computer

The fifth element of Hill Claim 1 is storing, at the remote computer, a constant data revision status indicating the revision level of the constant data stored at the remote computer. Hill's recitation of storing a constant data revision status at the remote computer is matched by Applicants' amended Claim 1 element 5 recitation of a "predetermined plan" and element 6 recitation of "the predetermined plan being implemented, at least in part, by ascribing a storage control attribute to the application data, the control attribute dictating eligibility of the application data for storage".

As indicated above, in Applicants' disclosure data assigned the third or fifth storage candidacy value are examples of constant data. Applicants disclose that, in the preferred embodiment, "objects carry application program instructions and/or information for display at [the] monitor screen... of [the] RS." P. 9, lines 29-30. In this embodiment, the RS includes means for selectively storing program instructions and display data in the form of data objects which are stored at the RS in accordance with a predetermined storage criteria. P. 10, lines 13-27. Applicants further disclose that "to effect object storage management, objects are provided with a coded version id made up of the storage control byte and version control bytes" which are "elements of the object header." P. 135, lines 22-28. The currency of data stored at the RS is

established by virtue of the storage control parameters and a check of the version level prior to use. P. 10, lines 13-19. Version checking is performed in the same way for data files, i.e., the version level is included in the file containing the data and the version checking is performed in the same way.

Applicants' elements 5 and 6 thus correspond to Hill element 5.

6. The Step Of Transmitting The Remote Revision Status From The Remote Computer To The Main Computer Is The Same In Hill's And Applicants' Claims

The sixth element of Hill Claim 1 is the step of transmitting the remote revision status from the remote computer to the main computer. Applicants' corresponding recitation in element 5 of amended Claim 1 of "distributing application data in accordance with a predetermined plan to data stores maintained, respectively, at the host computers, the concentrator computers and the reception system computers" includes, inter alia, selective updating of stale data based on version checking. Applicants' disclosure supports this claim language as encompassing the same subject matter as the Hill Claim 1 revision status checking recitation. As discussed immediately above, the currency of data stored at the RS is established by virtue of the storage control parameters and a check of the version level prior to use. Applicants' specification states in this regard:

> In preferred form, the method aspect of the invention includes ... steps for distributing selected objects [data] within the network in accordance with a predetermined plan based on the likelihood a user will request a particular application (emphasis added).

P. 5, lines 1-7.

> [T]he method aspect of operating the preferred form of the network apparatus includes steps for establishing data stores ... and, thereafter, distributing application data to data stores ... in accordance with a predetermined plan designed to reduce the time required to present a requested application (emphasis added).

P. 5, lines 20-27.

> [T]o render a public informational and transactional network of the type considered here attractive, the network must be both economical to use and fast. That is to say the network must supply information and transactional support to the user at minimal costs and with a minimal response time. In accordance with the present invention, these objectives are sought to be achieved by locating as many information and transactional support objects [data] which the user is likely to request, as close to the user as possible, i.e., primarily at the user's RS 400 and secondarily at delivery system 20. In this way, the user will be able to access objects [data] required to support a desired application with minimal intervention of delivery system 20, thus reducing the cost of the session and speeding the response time.

P. 134, line 29 - p. 135, line 5.

> Additionally, to assure currency of the information and transaction support provided at RS 400, objects [data] are further coded for version identification and checking in accordance with a system of priorities that are reflected in the storage candidacy coding.

P. 135, lines 17-21. Thus, the recitation of a predetermined plan of information distribution constitutes, inter alia, version identification and checking so that stale information is not used. Applicants further state with regard to version checking to maintain currency of remotely stored information:

> When objects [data] are requested from object storage facility 439, only the latest version of the object will be provided to guarantee currency of information to the user. Object storage facility 439 assures currency by requesting version verification from network 10 for those objects which are available locally and by requesting

> objects which are not locally available from delivery system 20 where currency is maintained.

P. 133, lines 7-13.

> The version value ... provides a parameter that can be checked against predetermined values available from delivery system 20 to determine whether an object [data] stored at RS 400 is sufficiently current to permit its continued use, or whether the object has become stale and needs to be replaced with a current object from delivery system 20.

P. 135, lines 36 - p. 136, line 5.

> With respect to version checking for currency, where an object [data] stored at RS 400 is initially fetched or accessed during a session, a request to delivery system 20 is made for the object by specifying the version i.d. of the object stored at RS 400. (emphasis added).
>
> In response, delivery system 20 will advise the reception system 400 either that the version i.d. of the stored object matches the currency value, i.e., the stored object is acceptable, or deliver a current object that will replace the stored object shown to be stale.

P. 139, lines 27-30. Applicants' predetermined plan thus clearly includes transmitting the remote version status from the remote computer to the main computer as claimed by Hill.[2] Thus, amended Claim 1 of Applicants' grandparent application is directed to selective transmission of data to maintain currency of constant data stored at the remote computer, which is the same as transmitting and comparing a remote revision status with a main revision status as recited by Hill's Claim 1.

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[2] And, moreover, Applicants' predetermined plan is directed to updating information at a remote computer based on a request made at the remote computer and is thus different from so-called "push technology".

Applicants' recitations in elements 7 and 10 of supplying application data to a reception system and assembling data at the reception system from data collected from the network, respectively, further correspond to Hill's sixth element.

Applicants' elements 5, 7 and 10 thus correspond to Hill element 6.

7. The Step Of Comparing The Remote Revision Status With The Main Revision Status Is The Same In Hill's And Applicants' Claims

The seventh element of Hill Claim 1 is the step of comparing the version of the constant data stored in the memory of the remote computer with the version of the same data stored in the memory of the main computer (i.e., network delivery system). Applicants' corresponding recitation in element 5 of amended Claim 1 of "distributing application data in accordance with a predetermined plan to data stores maintained, respectively, at the host computers, the concentrator computers and the reception system computers" includes, inter alia, selective updating of stale data based on version checking. Applicants' disclosure supports this claim language as encompassing the same subject matter as the Hill Claim 1 revision status checking recitation. Applicants' specification states in this regard:

> In preferred form, the method aspect of the invention includes ... steps for distributing selected objects [data] within the network in accordance with a predetermined plan based on the likelihood a user will request a particular application (emphasis added).

P. 5, lines 1-7.

> [T]he method aspect of operating the preferred form of the network apparatus includes steps for establishing data stores ... and, thereafter, distributing application data to data stores ... in accordance with a predetermined plan designed to reduce the time required to present a requested application (emphasis added).

P. 5, lines 20-27.

> [T]o render a public informational and transactional network of the type considered here attractive, the network must be both economical to use and fast. That is to say the network must supply information and transactional support to the user at minimal costs and with a minimal response time. In accordance with the present invention, these objectives are sought to be achieved by locating as many information and transactional support objects which the user is likely to request, as close to the user as possible, i.e., primarily at the user's RS 400 and secondarily at delivery system 20. In this way, the user will be able to access objects [data] required to support a desired application with minimal intervention of delivery system 20, thus reducing the cost of the session and speeding the response time.

P. 134, line 29 - p. 135, line 5.

> Additionally, to assure currency of the information and transaction support provided at RS 400, objects [data] are further coded for version identification and checking in accordance with a system of priorities that are reflected in the storage candidacy coding.

P. 135, lines 17-21. Thus, the recitation of a predetermined plan of information distribution constitutes, inter alia, version identification and checking so that stale information is not used. Applicants further state with regard to version checking to maintain currency of remotely stored information:

> When objects [data] are requested from object storage facility 439, only the latest version of the object will be provided to guarantee currency of information to the user. Object storage facility 439 assures currency by requesting version verification from network 10 for those objects which are available locally and by requesting

> objects which are not locally available from delivery system 20 where currency is maintained. (emphasis added)

P. 133, lines 7-13.

> The version value ... provides a parameter that can be checked against predetermined values available from delivery system 20 to determine whether an object [data] stored at RS 400 is sufficiently current to permit its continued use, or whether the object has become stale and needs to be replaced with a current object from delivery system 20.

P. 135, lines 36 - p. 136, line 5.

> With respect to version checking for currency, where an object [data] stored at RS 400 is initially fetched or accessed during a session, a request to delivery system 20 is made for the object by specifying the version id of the object stored at RS 400.
>
> In response, delivery system 20 will advise the reception system 400 either that the version i.d. of the stored object matches the currency value, i.e., the stored object is acceptable, or deliver a current object that will replace the stored object shown to be stale. (emphasis added).

P. 139, lines 27-30. Applicants' predetermined plan thus clearly includes comparing the remote revision status with the main revision status stored at the main computer. Thus, amended Claim 1 of Applicant's grandparent application is directed to selective transmission of data to maintain currency of constant data stored at the remote computer, which is the same as transmitting and comparing a remote revision status with a main revision status as recited by Hill's Claim 1.

Applicants' recitations in element 7 of supplying application data to a reception system and in element 10 of assembling data at the reception system from data collected from the network further correspond to Hills' seventh element.

Applicants' elements 5, 7 and 10 thus correspond to Hill element 7.

8. The Step Of Updating Constant Data At The Remote Computer Is The Same In Hill's And Applicants' Claims

The eighth element of Hill Claim 1 is the step of updating the constant data stored at the remote computer so as to maintain currency of the constant data available to the user. Applicants' element 5 recitation of "a predetermined plan ..." corresponds to this element as discussed with respect to the previous two elements. After transmitting the remote revision status to the network delivery system and comparing it to the main revision status, stale constant data is updated at the remote computer:

> [D]elivery system 20 will ... deliver a current object [data] that will replace the stored object shown to be stale.

P. 139, lines 27-30. Applicants' predetermined plan thus clearly includes updating constant data at the remote computer.

Applicants' recitations in element 7 of supplying application data to a reception system, in element 9 of assembling data at the reception system from data collected from the reception system and in element 10 of assembling data at the reception system from data collected from the network further correspond to Hill's eighth element.

Applicants' elements 5, 7, 9 and 10 thus correspond to Hill element 8.

9. The Step Of Transmitting Variable Data From The Main Computer To The Remote Computer Is The Same In Hill's And Applicants' Claims

The ninth element of Hill Claim 1 is the step of transmitting variable data from the network delivery system to the remote computer. Applicants' disclosure supports the corresponding amended Claim 1 element 7 recitation of "supplying application data to a

respective reception system computer" for the transmission of variable data to the remote computer. In this regard, Applicants disclose that data that changes frequently does not persist on the remote computer beyond, at most, a particular user session, but rather is retrieved from the main computer (i.e., the network delivery system):

> A first candidacy value is applied where the object [data] is very sensitive to time; e.g., news items, volatile pricing information such as might apply to stock quotes, etc. In accordance with this first value, the object will not be permitted to be stored on RS 400, and RS 400 will have to request such objects from delivery system 20 each time it is accessed, thus, assuring currency. A second value is applied where the object is sensitive to time but less so than the first case; e.g., the price of apples in a grocery shopping application. Here, while the price might change from day to day it is unlikely to change during a session. Accordingly, the object will be permitted to persist in RAM or at the disk cache during a session, but will not be permitted to be maintained at RS 400 between sessions.

Filepp et al., p. 137, lines 8-19.

Applicants' recitation in element 10 of assembling data at the reception system from data collected from the network further corresponds to Hill's ninth element.

Applicants' elements 7 and 10 thus correspond to Hill element 9.

10. The Step Of Combining Constant And Variable Data At The Remote Computer Is The Same In Hill's And Applicants' Claims

The tenth element of Hill Claim 1 is the step of collecting and combining the constant data stored at the remote computer with variable data which is transmitted from the network computer to provide the requested information about the product or service to the user of the remote computer. Applicants' disclosure supports the corresponding amended Claim 1

elements 7 through 10 recitation of "supplying application data to a respective reception system computer at which an application is requested so that the respective reception system computer can assemble the data which makes up the requested application by selectively collecting data from its own data store and the data stores of the respective host computer and concentrator computer to which it is connected" as constituting the collecting and combining of constant and variable data to provide information to a user at the remote computer. In this regard, Applicants give the example of a user at the remote computer purchasing an apple through the network. The price of an apple is transmitted from the network because it is data that changes so frequently that there is no point in storing it at the RS (corresponding to Hill's variable data). P. 137, lines 13-19. At p. 148, line 26 - p. 153, line 10, the entire procedure by which the user interacts with the RS and the network to purchase apples is detailed. Again, at p. 149, line 36, the price of an apple is obtained from the network delivery system (or main computer) after being selected from the RS. The presentation data etc. related to the interactive apple purchase corresponds to Hill's constant data and is stored at the RS because it does not change frequently. The constant presentation data etc. related to the purchase of apples is clearly shown in Applicants' Fig. 3b, with blank spaces for the variable price data transmitted from the network. Thus, Applicants disclose, inter alia, integrating constant data related to an apple purchase stored at an RS with variable data related to, e.g., the price of an apple obtained from the network.

Applicants' elements 7-10 thus correspond to Hill element 10.

11. Summary As To The Satisfaction Of 35 U.S.C. §135(b)

In accordance with 37 C.F.R. §1.607(a)(6) and 35 U.S.C. §135(b), Applicants have specifically identified a claim made on December 21, 1994 by amendment in the grandparent of the present application, for substantially the same subject matter as Claims 1-40 of the Hill patent. Applicants have shown above how their amended Claim 1 corresponds to each and every element of claim 1 of the Hill '490 patent, i.e., the proposed count. This showing more than satisfies the requirement of 35 U.S. §135(b). All that is required to show that a claim is directed to the same subject matter as another claim is to show that the second claim is obvious in view of the first. Fiddes v. Baird, 30 USPQ2d at 1484-85. The Hill '490 patent issued on June 18, 1996, and, hence, amended Claim 1 of Applicants' grandparent application was made prior to one year from the date on which the Hill patent was granted. Applicants are therefore entitled to present additional claims directed to the same subject matter as Hill's claims. MPEP §2307.02; Tezuka v. Wilson, 224 USPQ 1030, 1036 (Bd. Pat. Int. 1984). Applicants have previously presented claims 33-72 which were copied from Hill claims 1-40 and are thus directed to the same subject matter as Hill's claims.

CONCLUSION

Applicants' Claims 33-72, respectively, define the same subject matter as the Hill '490 patent Claims 1-40. In addition, Applicants' amended Claim 1 of their grandparent application also is directed to the same subject matter as the Hill '490 patent Claim 1. For the reasons set forth above, the rejection of Claims 33-72 under 35 U.S.C. §135(b) in view of the

Hill '490 patent should be withdrawn and Claims 33-72 should be allowed. An interference should be declared using the Count proposed in Applicants' September 18, 1997 Request for Interference, i.e., Claim 33 of the present application. The undersigned attorney for Applicants stands ready to meet with the Examiners either in person or telephonically to discuss any matters discussed herein if the Examiners feel that a meeting would assist their consideration of the Applicants' request.

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Respectfully submitted,

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